



Lab 1
Sphere

Test Sample Description

Catalog Number: P300206-009-30

Description: 3ft LED Circular-Cross-Section Vanity with Acrylic Refractor and Decorative Trim

Photometry

IES LM-46-04
Test Method: IES LM-79-08 §10

Preburn Time: 0:50

Time To Stabilize: 2:00

Total Operating Time: 3:00

Input Voltage (Volts): 120.2

Input Current (Amps): 0.291

Input Wattage (Watts): 34.3

Ambient Temp (°C): 24.8

Sphere

IES LM-16-93
Test Method: IES LM-79-08 §12.1

Preburn Time: 4:00

Time To Stabilize: 1:08

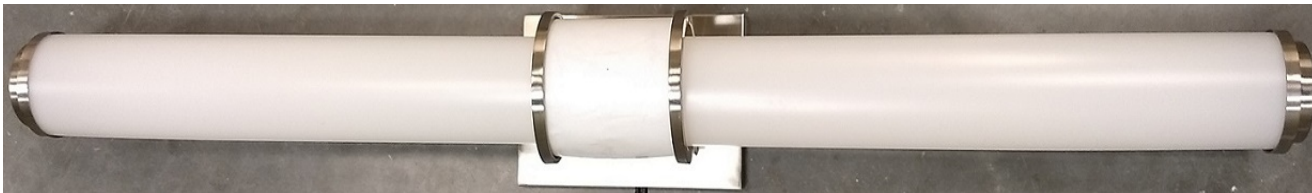
Total Operating Time: 5:08

Input Voltage (Volts): 120.0

Input Current (Amps): 0.291

Input Wattage (Watts): 34.1

Ambient Temp (°C): 24.5



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Checked (sphere): B. LEE
Checked (photometry): D. ROBBINS
Approved: P. McCARTHY

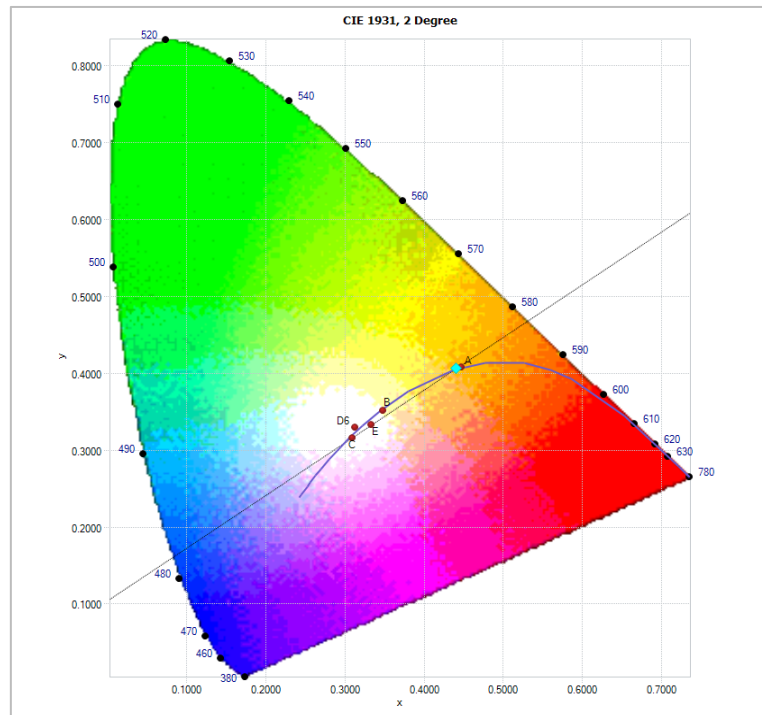




Lamp Cat#: 2835 0.5W
 Lamp Desc: 66 - Edison 3000K LEDs
 Driver Desc: 1 - Becky BQE36-0830-40-TD
 Programmed to 550mA

Efficacy: 72.8 LPW S/P Ratio: 1.4 LM/LM

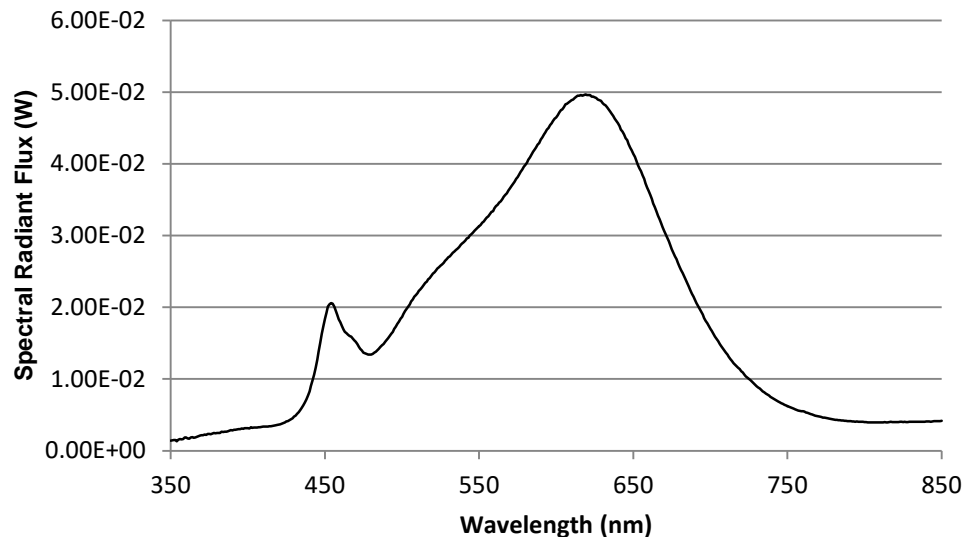
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	9.20	watts
Φ(v)	2482	lumens
Φ(v')	3504	lm'
Chrom x	0.4399	
Chrom y	0.4062	
Chrom u	0.2516	
Chrom v	0.3484	
Duv	0.0002	
Chrom u'	0.2516	
Chrom v'	0.5227	
CCT	2966	K
Purity	54	%
λ (dom)	582.8	nm
FWHM	161.2	nm
λ (peak)	619.6	nm
λ (center)	601.3	nm
λ (centroid)	599.4	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000462973	
Correlation	0.0054	
R1	92.6	
R2	96.9	
R3	98.8	
R4	92.2	
R5	92.5	
R6	96.8	
R7	91.3	
R8	80.4	
R9	56.6	
R10	92.1	
R11	93.0	
R12	85.8	
R13	93.8	
R14	99.6	

Spectral Distribution of Radiant Flux





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REPORT NUMBER: 18.00948

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ISSUE DATE: 06/12/18

PREPARED FOR: PROGRESS

CATALOG NUMBER: P300206-009-30

LUMINAIRE: 3ft LED Circular-Cross-Section Vanity
with Acrylic Refractor and Decorative Trim

LAMP CAT. NO.: 2835 0.5W

LAMP: 66- Edison 3000K LEDs

BALLAST CATALOG NUMBER: BQE36-0830-40-TD

BALLAST: 1- Becky - Programmed to 550mA

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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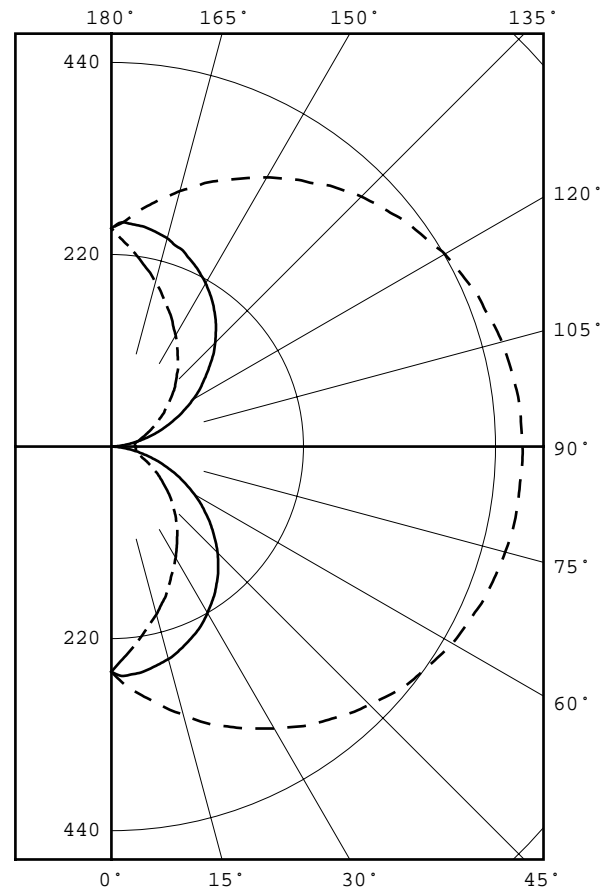
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CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0	FLUX
0	258	258	258	258	258	
5	280	272	262	240	236	24
15	318	295	252	210	199	72
25	356	311	233	177	163	113
35	390	321	206	142	131	145
45	418	324	172	110	101	167
55	441	322	131	79	72	177
65	457	317	88	49	48	176
75	467	310	45	27	31	168
85	470	304	9	19	28	162
90	471	303	2	18	28	
95	470	304	10	18	27	161
105	463	307	46	30	35	169
115	449	311	87	52	53	175
125	429	315	128	81	76	174
135	405	314	168	111	104	164
145	373	308	202	143	132	142
155	338	297	228	176	163	110
165	303	282	247	207	195	69
175	265	259	256	236	230	24
180	250	250	250	250	250	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	209	8.7
0- 40	355	14.8
0- 60	699	29.2
0- 90	1205	50.3
90-120	505	21.1
90-130	679	28.4
90-150	985	41.2
90-180	1188	49.7
0-180	2393	100.0

EFFICACY = 69.8 lm/W
CIE TYPE - GENERAL DIFFUSE
PLANE : 0-DEG 90-DEG 180-DEG
SPACING CRITERIA : 2.21 1.26 0.88
SHIELDING ANGLES : 90 90



LEGEND
0-deg ———
90-deg - - - -
180-deg - . - . -



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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 3.000 34.500
HEIGHT OF SIDE : 3.000 3.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE AVERAGE AVERAGE
IN DEG 0-DEG 90-DEG 180-DEG
45 4426. 3351. 1070.
55 4742. 3043. 774.
65 5150. 2628. 541.
75 5710. 1966. 379.
85 6497. 776. 387.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	258	258	258	258	258	258	258	258	258
5.0	280	278	272	263	262	247	240	238	236
10.0	298	296	284	268	258	237	225	220	216
15.0	318	312	295	270	252	224	210	203	199
20.0	339	330	304	270	243	211	195	185	182
25.0	356	344	311	269	233	196	177	167	163
30.0	373	358	316	264	220	180	160	151	147
35.0	390	372	321	258	206	163	142	133	131
40.0	404	383	323	250	190	146	127	119	116
45.0	418	394	324	240	172	127	110	104	101
50.0	432	402	323	229	152	109	94	88	87
55.0	441	409	322	216	131	91	79	74	72
60.0	451	415	320	203	110	73	64	60	60
65.0	457	419	317	188	88	56	49	47	48
70.0	463	422	313	174	66	40	37	37	38
75.0	467	424	310	160	45	26	27	29	31
80.0	470	426	307	149	26	15	21	27	30
85.0	470	426	304	141	9	9	19	26	28
90.0	471	425	303	138	2	7	18	25	28
95.0	470	425	304	142	10	10	18	24	27
100.0	467	422	305	149	26	17	22	28	29
105.0	463	420	307	159	46	28	30	34	35
110.0	456	417	310	171	66	42	40	42	43
115.0	449	411	311	185	87	58	52	53	53
120.0	441	406	314	199	108	74	66	65	64
125.0	429	398	315	211	128	91	81	78	76
130.0	417	390	315	224	148	110	96	92	90
135.0	405	380	314	234	168	128	111	107	104
140.0	390	369	312	243	186	146	126	120	119
145.0	373	357	308	250	202	163	143	135	132
150.0	356	342	303	255	216	179	158	150	147
155.0	338	329	297	260	228	195	176	167	163
160.0	322	315	290	262	239	209	192	183	178
165.0	303	298	282	262	247	222	207	199	195
170.0	284	281	272	260	253	234	221	215	212
175.0	265	265	259	255	256	244	236	232	230
180.0	250	250	250	250	250	250	250	250	250



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	6
5- 10	18
10- 15	30
15- 20	41
20- 25	52
25- 30	61
30- 35	69
35- 40	76
40- 45	82
45- 50	86
50- 55	88
55- 60	89
60- 65	89
65- 70	87
70- 75	85
75- 80	83
80- 85	81
85- 90	80
90- 95	80
95-100	81
100-105	83
105-110	85
110-115	87
115-120	88
120-125	88
125-130	87
130-135	84
135-140	80
140-145	74
145-150	68
150-155	59
155-160	50
160-165	40
165-170	29
170-175	18
175-180	6

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	24
0- 20	96
0- 30	209
0- 40	355
0- 50	522
0- 60	699
0- 70	875
0- 80	1043
0- 90	1205
0-100	1366
0-110	1535
0-120	1710
0-130	1884
0-140	2048
0-150	2190
0-160	2300
0-170	2369
0-180	2393



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	95	89	84	79	87	82	77	73	69	65	62	56	54	51	45	43	41	36
2	85	76	69	62	78	70	63	58	58	53	49	48	44	41	38	35	33	28
3	77	66	58	51	70	61	53	47	51	45	40	41	37	33	33	29	27	22
4	70	58	49	42	64	53	45	39	44	38	33	36	32	28	29	25	22	18
5	64	51	42	36	58	47	39	33	39	33	28	32	27	24	26	22	19	15
6	59	46	37	30	54	42	34	28	35	29	24	29	24	20	23	19	16	13
7	54	41	32	26	49	38	30	25	32	26	21	26	21	18	21	17	14	12
8	50	37	29	23	46	34	27	22	29	23	19	24	19	16	19	15	13	10
9	47	34	26	20	43	31	24	19	26	21	16	22	17	14	18	14	11	9
10	44	31	23	18	40	29	22	17	24	19	15	20	16	12	16	13	10	8

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

Project Number
18.00948



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Date
6/11/2018

Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-38

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 25889.0 Lumens

Calibration Date: 07/10/2017

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>		N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	10/25/2018
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	10/26/2018

Sphere Calibration

Calibration Lamp: EIKO 28V75W/E10

Lamp Number: SCL-1400-J136

Calibration Current: 2.679 Amps

Total Luminous Flux: 1427 Lumens

Test Equipment Used - Color & SPD; THD & Power Factor

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>3-Meter Sphere</i>	Labsphere / LMS-3M	N/A	Checked Daily
<i>Thermometer</i>	National Instruments / USB TC01	1912751	10/26/2018
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	10/25/2018
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	0331159372	N/A
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	N/A
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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